



Agricultural Marketing Service

7 CFR Parts 800 and 810

[Doc. No. AMS-FGIS-22-0083]

United States Standards for Soybeans

AGENCY: Agricultural Marketing Service, USDA.

ACTION: Proposed rule.

SUMMARY: The Agricultural Marketing Service (AMS) proposes to revise the United States Standards for Soybeans by removing soybeans of other colors (SBOC) as an official factor. In addition, AMS proposes to revise the table of Grade Limits and Breakpoints for Soybeans to reflect this change.

DATES: Comments must be submitted on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

FOR FURTHER INFORMATION CONTACT: Barry Gomoll, USDA AMS; Telephone: (202) 720-8286; Email: Barry.L.Gomoll@usda.gov. Copies of the proposed U.S. Standards for Soybeans are available at <https://www.regulations.gov>. Copies of the current Standards are available at <https://www.ams.usda.gov/grades-standards/grain-standards>.

SUPPLEMENTARY INFORMATION: This proposed action, pursuant to 5 U.S.C. 551 *et seq.*, would amend regulations, at 7 CFR part 800 and part 810, issued under the United States Grain Standards Act (7 U.S.C. 71-87k), as amended (USGSA). Section 4 of the USGSA (7 U.S.C. 76(a)) grants the Secretary of Agriculture the authority to establish standards for grain regarding kind, class, quality, and condition.

Executive Orders 12866 and 13563

AMS is issuing this proposed rule in conformance with Executive

Orders 12866 and 13563. Executive Orders 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). Executive Order 13563 emphasizes the importance of quantifying both costs and benefits, reducing costs, harmonizing rules, and promoting flexibility. This proposed action falls within a category of regulatory actions that the Office of Management and Budget (OMB) has exempted from review under Executive Order 12866.

Executive Order 13175

This proposed rule has been reviewed under Executive Order 13175—Consultation and Coordination with Indian Tribal Governments, which requires agencies to consider whether their rulemaking actions would have tribal implications.

AMS has determined that this proposed rule is unlikely to have substantial direct effects on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

Executive Order 12988

This proposed rule has been reviewed under Executive Order 12988, Civil Justice Reform. This proposed action is not intended to have retroactive effect. There are no administrative procedures that must be exhausted prior to any judicial challenge to the provisions of this rule.

Background

AMS regularly reviews grain standards to ensure their effectiveness in meeting the quality requirements of grain moving in the value chain. Under the

current soybean standards, soybeans of other colors (SBOC) is a grade determining factor in the class Yellow Soybeans. As such, SBOC content is not typically a factor that determines the numerical grade for a sample. Damage or foreign material typically has the greatest impact on the numerical grade of a given soybean shipment.

Until recently, yellow soybeans have shown phenotypic stability in seedcoat color; however, modern breeding technologies have produced varieties that have a higher tendency to demonstrate variations in seed coat color. Industry interactions (with producer groups, exporters, grain elevators, and grain processors) suggest that these varieties are gaining popularity with soybean growers and likely will be present in the value chain for the foreseeable future.

Official inspection data shows a sharp rise in the amount of SBOC found in soybean samples over the past two years. In 2019 and 2020, only 0.4% and 0.2%, respectively, of all inspected soybean lots failed to meet the standard for U.S. No. 1 Yellow Soybeans, as was typical in the years leading up to 2021. In 2021, 3.1% of all inspected soybean lots failed to meet the standard for U.S. No. 1 Yellow Soybeans, followed by 8.8% of lots inspected so far in 2022. The figures for 2022 also show an uneven distribution based on mode of conveyance, with 17.7% of container lot inspections failing to meet the standard versus 5.3% of shiplot inspections.

The increase in SBOC over the past two years has made it more difficult for shippers of U.S. soybeans to meet contract grade requirements, based solely on the factor of SBOC. Although research shows that SBOC do not impact the intrinsic quality of soybeans, such soybeans, present at certain levels, still influence the final grade of soybeans because of the current soybean grade

standards.

The Department of Agriculture (USDA) Grain Inspection Advisory Committee recommended, at its June 2022 meeting in Kansas City, MO, that the Federal Grain Inspection Service conduct a study to determine whether the presence of higher SBOC has any impact on the oil and protein content of soybeans. The results of the study show no significant correlation between SBOC and protein and oil content.¹ Additionally, based on visual analysis, the color variation in the seedcoat does not extend into the cotyledon. Since most commercial crushing operations remove the hull before crushing, this is not likely to affect the color of the finished product.

Several producer and exporter groups have reached out to AMS to request that the soybean standards be reviewed to address the marketing challenges introduced by the higher presence of SBOC in U.S. soybeans. The groups requested that consideration be given, and provision be made, for those soybean processors who may desire soybeans with yellow seedcoats. In such instances, applicants for service would maintain the ability to request that soybeans be inspected for SBOC.

This proposed rule would remove SBOC as a criterion for determining the grade of U.S. Yellow soybeans (e.g., U.S. No. 1, No. 2, No. 3, etc.). It also would retain SBOC as a class-determining criterion in the class “Yellow soybeans.” Official inspectors would only determine SBOC if needed to meet the definition of “Yellow soybeans” or at the request of an applicant for service. Accordingly, official certificates for Yellow soybeans would not show SBOC content unless requested by the applicant for service. Any sample of soybeans containing more than 10.0 percent of SBOC would continue to be graded as the class Mixed soybeans.

¹ <https://www.ams.usda.gov/sites/default/files/media/FGISSBOCStudy.pdf>

A 30-day comment period is provided for interested persons to submit comments on the proposed revised Grade Standards. Copies of the proposed revised standards are at <https://www.regulations.gov>.

Implementation Period

The USGSA requires that changes to the grain standards may not be made effective within one calendar year of their promulgation “unless in the judgment of the Secretary, the public health, interest, or safety require that they become effective sooner” (7 U.S.C. 76(b)(1)). This provision was put into place to allow industry participants adequate time to make adjustments and transition to new standards. However, in this case, the soybeans that are more likely to exhibit discolored seedcoats and trigger higher determinations of SBOC in soybean samples are already present in the supply chain. Additionally, based on AMS research showing that the color variation does not materially affect the end use of the soybeans, AMS does not foresee any deleterious effects to farmers or merchandisers by making the rule effective sooner. AMS believes that implementing this proposed rule effective September 1, 2023, would be in service of public interest. AMS invites all interested parties to comment on whether this change is necessary to implement effective September 1, 2023.

Initial Regulatory Flexibility Analysis

Pursuant to the requirements set forth in the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*), AMS has considered the impact of this proposed rule on small entities. Accordingly, AMS has prepared this initial Regulatory Flexibility analysis. The purpose of the RFA is to fit regulatory actions to the scale of businesses subject to such actions in order that small businesses will not be unduly or disproportionately burdened.

As stated earlier in this proposed rule, modern breeding technologies have produced varieties that have a higher tendency to demonstrate variations in seed coat color. Official inspection data shows a sharp rise in the presence of soybeans that

demonstrate these color variations, as well as impacts to the grade of U.S. soybeans. For instance, soybean discoloration can cause soybeans to be downgraded, which can potentially reduce the price of soybeans to producers, or even cause the soybeans to be rejected by some purchasers.

It is estimated that these modern soybean varieties are being adopted rapidly and could have market share as high as 30 to 50 percent of the soybean seed market according to industry sources.² This rapid rate of adoption indicates that soybean producers see benefits exceeding costs in the production of soybean from this new seed breed. The proposed rule would eliminate color as an official factor that affects the grade of soybeans.

The proposed rule has been initiated at the request of industry, which recognizes the costs associated with lower grades and discounting. Reduced discounting due to the removal of the color requirement represents a benefit to producers. Costs of the rule primarily accrue to the government and would mainly involve the cost to the federal government for changing the standards electronically and in printed material.

The 2017 Agricultural Census (Census) reports soybean production, and classifies producers by income class, acreage, and other factors. The Small Business Administration (SBA) determines the cutoff level between large and small firms. The most recent SBA guidance has a size cutoff of \$2.25 million for soybean producers. This classification is not specified in the Census, however, using current production and market data in combination with Census data, we can approximate the proportion of producers affected.

The Economic Research Service (ERS) reports that in 2021 soybean prices were \$13.25 per bushel, and the per acre production was 51.4 bushels per acre. Therefore, the

² Green, Jerry M., “The rise and future of glyphosate and glyphosate-resistant crops”, *Pest Management Science*, 2018, Volume 74, pp. 1035–1039.

per acre revenue is \$681. To be considered a large soybean producer, it would take \$2,250,000/\$681 or 3,304 acres. According to the Census, there were a total of 303,191 soybean producers, 1,624 of which were farms exceeding 3,000 acres. Thus, 0.5 percent of all soybean farms could be considered large.

However, to determine the impact of the rule on small farms, we must look at production of producers with less than 3,000 acres. Again from the Census, a total of 4.356 billion bushels were produced, with 0.332 billion bushels produced on farms of 3,000 or more acres, or 7.6 percent of production. Therefore, 92.4 percent of total production in 2017 came from small farms, according to the SBA definition.

The ERS reports that in 2021, 4.435 billion bushels of soybeans were produced in the U.S., with a carryover inventory of 0.257 billion bushels, for a total of 4.692 billion bushels available. Assuming the same production proportions between small and large farms as in the 2017 Census would yield a total of 4.334 billion bushels produced by farms of less than 3,000 acres.

AMS has data on the share of soybeans that are graded based on color for each of the four grade categories. Table 1 shows the distribution for an average over the 2010-2020 period. Individual years' data varies little from the overall average. However, data from 2022 shows a sharp decline in the share of soybeans with the highest grade, and an increase in the lower grade levels. The last line in the table shows the difference between the two, indicating a significant change in grading based on color since the introduction of the new seeds.

Table 1. Share of Soybeans Graded Based on Color by Grade Level*

Category	% #1 SBOC	% #2 SBOC	% #3 SBOC	% #4 SBOC
2010-2020 Average	99.60%	0.24%	0.11%	0.05%
2022	83.12%	11.42%	4.98%	0.48%
Difference	16.48%	11.18%	4.87%	0.43%

*SBOC = Soybeans of other colors

The price impact on graded soybeans is less significant than Table 1 might

suggest, as there is typically little price difference between grades #1 and #2. However, grades #3 and #4 are discounted by 1.5 cents and 3.5 cents, respectively. The total impact on small farm revenues is shown in Table 2.

Table 2. Calculation of Discounts for SBOC Under Current Grade Standards

Grade	Share	Production (Bu.)	Affected Bushels	Discount (per Bu.)	Total Discount
#3	4.87%	4,334,091,811	211,018,410	\$0.015	\$3,165,276
#4	0.43%	4,334,091,811	18,587,862	\$0.035	\$650,575
Total			229,606,272		\$3,815,851

Using the difference in grading shares between the 2010-2020 average, and applying the share to production by small farms, shows that a total of nearly 230 million bushels of soybeans we discounted in 2022, and the total discount was \$3.8 million. While we do not know the exact market share of the genetically modified soybeans in 2022, if we assume it was 30 percent, then an increase in market share of each additional 10 percent would be approximately \$1,272,000.

The total value of discounts due to color represents a benefit to small producers from removing the color standard. Given that the majority of producers are considered small entities and the majority of production comes from small farms, AMS believes the impacts of the proposed changes to the standards would not be disproportionate or unduly burdensome to small producers.

Inspection Plan Tolerances

To reflect the removal of SBOC as an official factor, AMS proposes to revise the tables pertaining to soybean grade limits in section 800.86 of the regulations. Shiplots and unit trains are inspected in accordance with a statistically based inspection plan (55 FR 24030; June 13, 1990). Inspection tolerances, commonly referred to as breakpoints, are used to determine acceptable quality. AMS's proposal to remove SBOC as an official factor necessitates removing soybean SBOC breakpoints from the Grade Limits and Breakpoints for Soybeans table. However, because SBOC would still be used to

determine class in Yellow soybeans, the Breakpoints for Soybean Special Grades and Factors table will remain unchanged. Under this proposal, that breakpoint would only apply to determining the class of a sample of soybeans. Inspection plan breakpoints would not apply to SBOC when an applicant requests that it be inspected on an official criteria basis.

Proposed AMS Action

AMS proposes to revise 7 CFR 810, Subpart J, United States Standards for Soybeans. It is proposed that SBOC be eliminated as a grading factor but be retained in the standards as part of the definition of the class Yellow soybeans. AMS also proposes to revise 7 CFR 800.86, Inspection of shiplot, unit train, and lash barge grain in single lots, paragraph (c)(2) by removing SBOC from table 17.

List of Subjects

7 CFR Part 800

Administrative practice and procedure, Conflict of interests, Exports, Freedom of information, Grains, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements.

7 CFR Part 810

Exports, Grain.

For reasons set forth in the preamble, the Agricultural Marketing Service proposes to amend 7 CFR parts 800 and 810 as follows:

PART 800 – GENERAL REGULATIONS

1. The authority citation for part 800 continues to read as follows:

Authority: 7 U.S.C. 71-87k.

2. Amend §800.86 by revising Table 17 to paragraph (c)(2) to read as follows:

§ 800.86 Inspection of shiplot, unit train, and lash barge grain in single lots.

* * * * *

(c) * * *

(2)* * *

Table 17 to paragraph (c)(2) – Grade Limits (GL) and Breakpoints (BP) for Soybeans

Grade	Maximum limits of --							
	Damaged kernels				Foreign Material (percent)		Splits (percent)	
	Heat damaged (percent)		Total (percent)					
	GL	BP	GL	BP	GL	BP	GL	BP
U.S. No. 1 ...	0.2	0.2	2.0	0.8	1.0	0.2	10.0	1.6
U.S. No. 2 ...	0.5	0.3	3.0	0.9	2.0	0.3	20.0	2.2
U.S. No. 3 ^{1/} ...	1.0	0.5	5.0	1.2	3.0	0.4	30.0	2.5
U.S. No. 4 ^{2/} ...	3.0	0.9	8.0	1.5	5.0	0.5	40.0	2.7

^{1/} Soybeans which are purple mottled or stained shall be graded not higher than U.S. No. 3.

^{2/} Soybeans which are materially weathered shall be graded not higher than U.S. No. 4.

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PART 810—OFFICIAL UNITED STATES STANDARDS FOR GRAIN

3. The authority citation for part 810 continues to read as follows:

Authority: 7 U.S.C. 71-87k.

4. Amend §810.1602 by revising paragraph (a)(1) and removing paragraph (g).

The revisions read as follows.

§810.1602 Definition of other terms.

(a) * * *

(1) **Yellow soybeans.** Soybeans that have yellow or green seed coats and which, in cross section, are yellow or have a yellow tinge, and may include not more than 10.0 percent of soybeans of other colors. Soybeans of other colors are soybeans that have black or bicolored seedcoats, as well as soybeans that have green seedcoats and are green in cross section. Bicolored soybeans will have seed coats of two colors, one of which is brown or

black, and the brown or black color covers 50 percent of the seed coats. The hilum of a soybean is not considered a part of the seed coat for this determination.

* * * * *

5. Revise §810.1603 to read as follows:

§810.1603 Basis of determination.

Each determination of class, heat-damaged kernels, damaged kernels, and splits is made on the basis of the grain when free from foreign material. Other determinations not specifically provided for under the general provisions are made on the basis of the grain as a whole.

6. Revise §810.1604 to read as follows:

§810.1604 Grades and grade requirements for soybeans.

Grading factors	Grades U. S. Nos.			
	1	2	3	4
Maximum percent limits of:				
Damaged kernels:				
Heat (part of total)	0.2	0.5	1.0	3.0
Total	2.0	3.0	5.0	8.0
Foreign material	1.0	2.0	3.0	5.0
Splits	10.0	20.0	30.0	40.0
Maximum count limits of:				
Other materials:				
Animal filth	9	9	9	9
Castor beans	1	1	1	1
Crotalaria seeds	2	2	2	2
Glass	0	0	0	0
Stones ^{1/}	3	3	3	3
Unknown foreign substance	3	3	3	3
Total ^{2/}	10	10	10	10
U.S. Sample grade are soybeans that:				
(a) Do not meet the requirements for U.S. Nos. 1, 2, 3, or 4; or				
(b) Have a musty, sour, or commercially objectionable foreign odor (except garlic odor);				
or				
(c) Are heating or otherwise of distinctly low quality.				

^{1/} In addition to the maximum count limit, stones must exceed 0.1 percent of the sample weight.

^{2/} Includes any combination of animal filth, castor beans, crotalaria seeds, glass, stones, and unknown foreign substances. The weight of stones is not applicable for total other material.

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